

DQA:

Date: 16/07/08



QA Closed

Date: 16/07/04

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: 148060		DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. D3121-143		Rework ☐		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐		
NCR No. 16-5876		Scrap ☒		Machining ☒	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐		
		Use-as-is ☐		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		
		Suspected Unapproved ☐		Large Fab ☐	Composite ☐	Supplier ☐			
Date: 16/06/27		Step #: 110		QTY Effective: 1			MRB (QSI042) Approval		
Description Work Order Deviation		Disposition			DAS 9 9-89 1606-29				
1 part. the spigot was over size by .0020		1 part scrap destroy no replace.			DAS Completed By 14 9-89 16/06/27				
Re. operator					Lead hand / Supervisor Approval Verification				
					DAS 38 9-89 JUN 27 2016				
					QC / QA Coordinator Approval				
					DAS 38 9-89 160629				
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☒	Operator ☒	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☒				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

June 22, 2016 10:49:52 AM

Page 2

Accept

Setup Start *NS1*

Stop *NS2*

Stop *NS2*

15

Cust Item ID:

15

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Operation Description

Set Up/ Run Hours

Tool ID	Tool #	Plan Code
---------	--------	-----------

Accept Qty	Reject Qty	Reject Number	Insp. Stamp

130

QC8- Inspect parts - second check

0.00

130

0.05

QC

Memo

Quality Control

DAS
14
9-89

9-89
16/06/27

140

0.00

140

Small Fab

0.13

Small Fab

Memo

Small Fab

Assemble D3121-143 as per Dwg D3121.

14X _____ 16/06/27 DAS 36 9-88

150

QC5- Inspect part completeness to step on W/O

0.00

150

0.05

QC

Memo

Quality Control

DAS
38
9-89
JUN 28 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

June 22, 2016 10:49:52 AM

Page 3

Accept

Setup Start *NS1*

Stop *NS2*

Start Date: 6/22/2016 **Start Qty:** 15.00 ***15***

Cust Item ID:

Required Date: 6/27/2016 **Req'd Qty:** 15.00 ***15***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Operation Description

Set Up/ Run Hours

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------	--------	--------------	---------------	---------------	------------------	----------------

160

Identify as per dwg & Stock Location:

0.00

160

Packaging

Memo

0.03

Packaging

6
9-89

~~JUN 28 2016~~

170

QC21- Final Inspection - Work Order Release

0.00

170

QC

Memo

0.25

Quality Control

16/6/29 
dem 16/06/28

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			Completed By
					Lead hand / Supervisor Approval Verification
					QC / QA Coordinator Approval
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

June 22, 2016 10:49:58 AM

Page 1

Work Order ID: 148060

148060

Parent Item: D3121-143

D3121-143

Parent Item Name: Bracket Assembly

Start Date: 6/22/2016

Required Date: 6/27/2016

Start Qty: 15.00

Required Qty: 15.00

Comments: IPP Rev:Pick:A04.02.18New issueKJ/DS
IPP Rev:B ECN 1060 07-11-12 DD verified by:EC
IPP Rev:C New Dimensions for Blank Size 08-07-23 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M174B1.250X02.000		Purchased				100	f	34.8600	0.368	5.810526			
-------------------	--	-----------	--	--	--	-----	---	---------	-------	----------	--	--	--

M174B1 250X02 000

17-4 SS Bar 1.250 x 2.00)

5.833'

DAS
20 16-06-24
9-89

Location

Loc Qty

Loc Code

MAT010

34.86

10.4

24.46

→ M134546

5.833'

D3121-21

Manufactured No

140 Each

54.0000

2

30

D3121-21

Bolt

16/06/27
DAS
36
9-89

Location

Loc Qty

Loc Code

ST018

54

145436

54

3028

D3121-241

Manufactured No

140 Each

71.0000

2

30

D3121-241

Bearing Assembly

16/06/27
DAS
36
9-89

Location

Loc Qty

Loc Code

FG

14

89826

4

95927

10

ST019

57

144717

2

145227

35

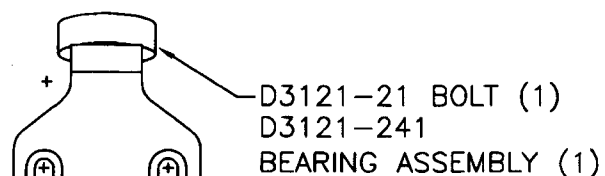
147578

20

3028



DESIGN #	DRAWN BY LE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3121	REV. E SHEET 2 OF 10
DATE 07.11.07		TITLE BRACKET ASSEMBLY	SCALE 1:2

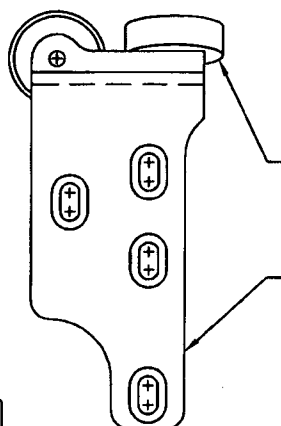


D3121-21 BOLT (1)
D3121-241
BEARING ASSEMBLY (1)

D3121-111 BRACKET

D3121-141 BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30-23001-01)

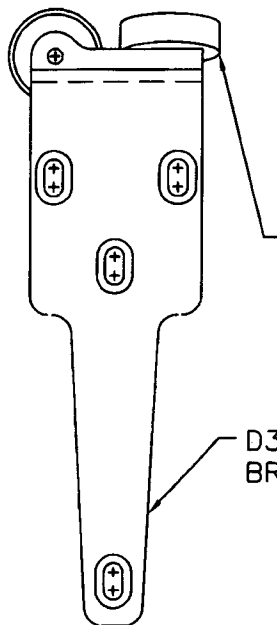
148060
6/22/16
AS
RELEASED
07.11.07



D3121-21 BOLT (1)
D3121-241 BEARING ASSEMBLY (1)
(2 PLACES)

D3121-113/-114 BRACKET

**D3121-143 (SHOWN) / D3121-144 (OPPOSITE)
BRACKET ASSEMBLY**
(REPLACES PREMIER P/N B30-23000-03/-04)



D3121-21 BOLT (1)
D3121-241 BEARING ASSEMBLY (1)
(2 PLACES)

D3121-115/-116
BRACKET

**D3121-145 (SHOWN) / D3121-146 (OPPOSITE)
BRACKET ASSEMBLY**
(REPLACES PREMIER P/N B30-23000-05/-06)

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

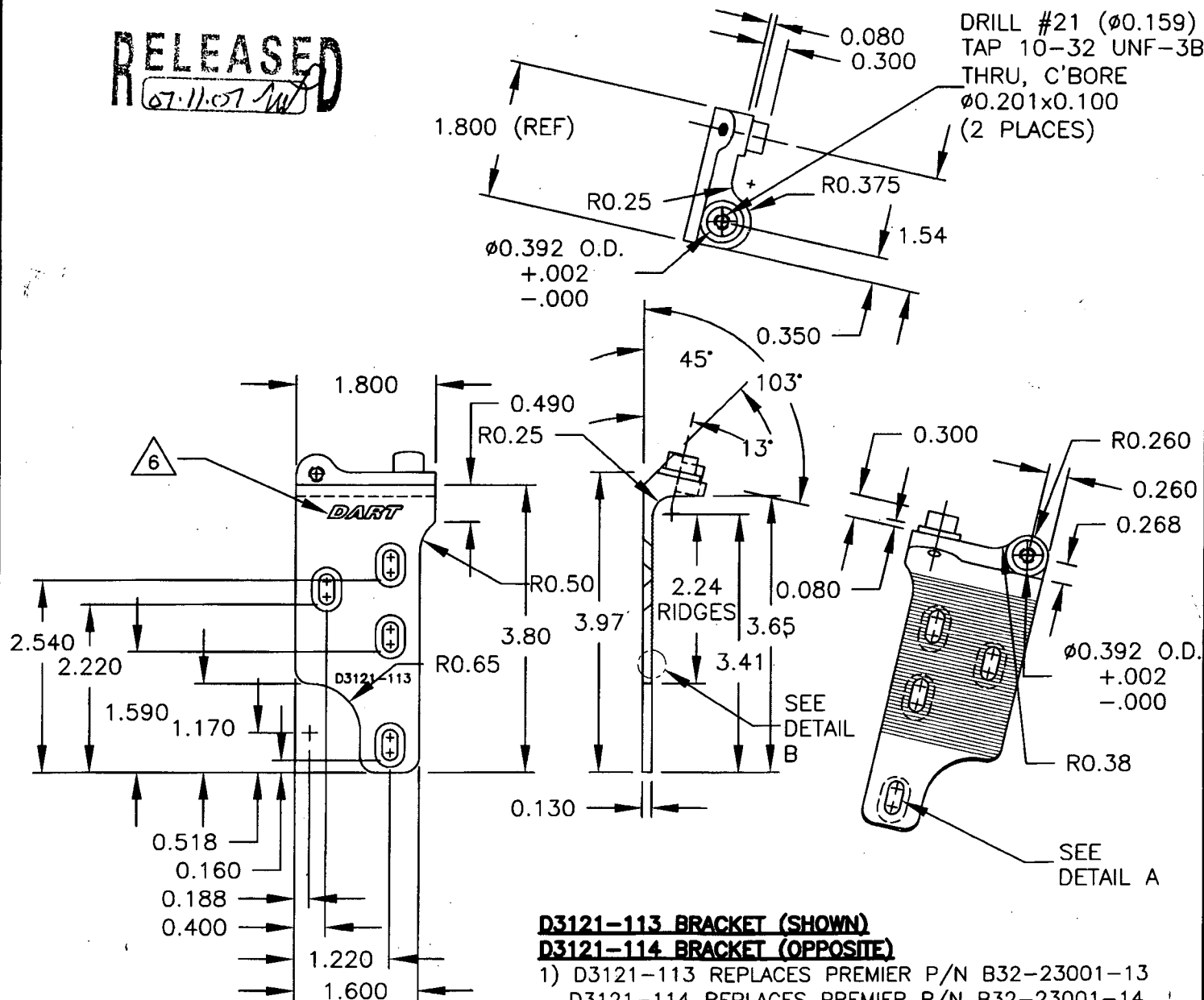
DART AEROSPACE LTD		Work Order:	148060
Description: Bracket		Part Number:	D3121-113
Inspection Dwg: D3121	Rev: E	Page 1 of 2	

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.080	+/-0.010	.081	/		vern	
0.300	+/-0.010	.300	/			
R0.375	+/-0.010	.375	/			
1.54	+/-0.030	1.541	/			
0.350	+/-0.010	.355	/			
R0.25	+/-0.030	.25	/			
Ø0.392	+0.002/-0.000	.393	/			
Ø0.201	+/-0.010	.200	/			
2.540	+/-0.010	2.540	/			
1.590	+/-0.010	1.590	/			
0.160	+/-0.010	.160	/			
0.400	+/-0.010	.401	/			
1.220	+/-0.010	1.222	/			
1.600	+/-0.010	1.603	/			
3.80	+/-0.030	3.790	✓			
1.800	+/-0.010	1.802	/			
R0.50	+/-0.030	.500	/			
0.130	+/-0.010	.131	/			
3.41	+/-0.030	3.410	✓			
3.65	+/-0.030	3.620	/			
2.24	+/-0.030	2.210	✓			
45°	+/-0.1°	45°	✓			
R0.25	+/-0.030	.250	✓			
3.97	+/-0.030	3.960	✓			
R0.38	+/-0.030	.375	✓			
Ø0.392	+0.002/-0.000	.393	/			
Ø0.201	+/-0.010	.200	/			
0.268	+/-0.010	.271	/			
R0.260	+/-0.010	.260	/			
0.080	+/-0.010	.080	✓			
0.300	+/-0.010	.300	/			
0.381	+/-0.010	.381	/			
0.201	+/-0.010	.207	✓			
0.580	+/-0.010	.580	✓			
0.400	+/-0.010	.400	/			

DART

DESIGN #	DRAWN BY LE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3121	REV. E SHEET 8 OF 10
DATE 07.11.07		TITLE BRACKET ASSEMBLY	SCALE 1:2

RELEASED
07.11.07**D3121-113 BRACKET (SHOWN)****D3121-114 BRACKET (OPPOSITE)**

- 1) D3121-113 REPLACES PREMIER P/N B32-23001-13
D3121-114 REPLACES PREMIER P/N B32-23001-14
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE STRENGTH = 150 ksi
MIN YIELD TENSILE STRENGTH = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

Copyright © 2002 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.